Appl. No. Unassigned;
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Preliminary Amendment

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Amendments to the Claims

1. (CURRENTLY AMENDED)   Arrangement on a semiconductor chip for calibrating a temperature setting curve having

- a signal generation unit ~~(2)~~ for providing a first signal ~~(I_{ptatH}, V_{ptatH}, f_{ptatH})~~, which is proportional to the actual temperature ~~T_1~~ of the chip, whereby a signal offset ~~(I_{virt}, V_{virt}, f_{virt})~~ is creatable by the signal generation unit ~~(2)~~, which is combined with the first signal ~~(I_{ptatH}, V_{ptatH}, f_{ptatH})~~ defining a second signal ~~(I_{ptatZ}, V_{ptatZ}, f_{ptatZ})~~;

- a signal extraction unit ~~(3)~~ receiving the first signal ~~(I_{ptatH}, V_{ptatH}, f_{ptatH})~~ and the second signal ~~(I_{ptatZ}, V_{ptatZ}, f_{ptatZ})~~ for calculating a first temperature point ~~(T_1)~~ based on the first signal ~~(I_{ptatH}, V_{ptatH}, f_{ptatH})~~ and a second temperature point ~~(T_z)~~ based on the second signal ~~(I_{ptatZ}, V_{ptatZ}, f_{ptatZ})~~.

2. (CURRENTLY AMENDED)   Arrangement as claimed in claim 1, whereby the first signal ~~(I_{ptatH}, V_{ptatH}, f_{ptatH})~~, which is proportional to the actual temperature ~~(T_1)~~ of the chip, is a current ~~(I_{ptatH})~~, a voltage ~~(V_{ptatH})~~ or a frequency ~~(f_{ptatH})~~.

3. (CURRENTLY AMENDED)   Arrangement as claimed in claim 1, whereby the first signal ~~(I_{ptatH}, V_{ptatH}, f_{ptatH})~~ and the second signal ~~(I_{ptatZ}, V_{ptatZ}, f_{ptatZ})~~ are convertible into digital signals, whereby the temperature extraction unit ~~(3)~~ calculates the first and second temperature points ~~(T_1, T_z)~~ for calibrating the temperature setting curve.

4. (CURRENTLY AMENDED)   Method for calibrating a temperature setting curve of a temperature sensor arrangement on a semiconductor chip, the method comprising:

- reading a first signal ~~(I_{ptatH}, V_{ptatH}, f_{ptatH})~~, which is proportional to the actual temperature ~~(T_1)~~ of the chip

- generating a signal offset ~~(I_{virt}, V_{virt}, f_{virt})~~, which is combined with the first signal ~~(I_{ptatH}, V_{ptatH}, f_{ptatH})~~ defining a second signal ~~(I_{ptatZ}, V_{ptatZ}, f_{ptatZ})~~

- extracting a first actual temperature T_1 from the first signal ~~(I_{ptatH}, V_{ptatH}, f_{ptatH})~~ and a second temperature ~~(T_z)~~ from the second signal ~~(I_{platZ}, V_{ptatZ}, f_{platZ})~~

5. (CURRENTLY AMENDED)   Method as claimed in claim 4, whereby the resulting temperatures ~~(T_1, T_z)~~ are used for providing calibration parameters to the

chip.

6. (ORIGINAL)   Method as claimed in claim 5, whereby calculating calibration parameters can be performed on-chip or off-chip.

7. (CURRENTLY AMENDED)   Method as claimed in claim 4, whereby additional signal offsets $(I_{virt2}, V_{virt2}, f_{virt2})$ are provided for calculating more than two temperature points (T_n) and calibrating a non linear temperature setting curve.

8. (CURRENTLY AMENDED)   Method as claimed in claim 4, whereby the signal offset $(I_{virt}, V_{virt}, f_{virt})$ is subtracted from first signal $(I_{ptat1}, V_{ptat1}, f_{ptat1})$ or added to the first signal $(I_{ptat1}, V_{ptat1}, f_{ptat1})$ defining the second signal $(I_{ptat2}, V_{ptat2}, f_{ptat2})$, which is provided to the temperature extraction unit (3).